



# INCOME APPROACH TO VALUATION

REAPPRAISAL SUBCOMMITTEE

February 6, 2009

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### **Income Approach to Valuation –**

“Income capitalization translates a stream of future income into a single present value. It considers the quantity and quality of future income, when the income is to be received, and the duration of the income stream. A capitalization rate is used to convert the income stream into one lump-sum value by the formula  $V=I/R$ , where V is the present value, I is the income, and R is the capitalization rate. The overall capitalization rate has three components, a discount rate, a recapture rate, and an effective tax rate (when the appraisal is done for an ad valorem assessment).” – While the full discussion of the Income Approach is contained in pages 231-299, this excerpt is taken from page 267 of the IAAO text titled, “Property Appraisal and Assessment Administration”. IAAO is the International Association of Assessing Officers.

### **Direct Capitalization –**

The overall capitalization rate is developed from an analysis of actual ratios of income to sale price of properties similar to the ones being appraised. – page 269 of the IAAO text titled, “Property Appraisal and Assessment Administration”. While we have accumulated data submitted by lessors from their own properties around Montana, the definition and direction for use of that data in the income approach comes from the standards established by IAAO and other fee appraisal organizations, such as the Appraisal Institute.

### **Determination of Overall Capitalization Rates – pages 364 & 365, IAAO**

Step 1: By structure type, divide net operating income by sales price.

Step 2: Array the resulting rates.

Step 3: Select the median (not overly influenced by extremes) for determination of average capitalization rate for the structure type.

### **Risk Gradations:**

Based on input from lenders and developers, and with the average capitalization rate derived from actual data as the base, each gradation that acknowledges lower or higher risk is applied in increments of 1/2 percentage points (higher risk properties have higher rates because they require

optimum actual income streams in order to have received desired sales prices).

- Investors typically see more high risk investments than low ones.
- The "risk" for typical investments can normally be addressed within a range of 2 percentage points.
- So, three gradations from average are used – 2 reflect higher risk; 1 reflects lower risk

**Selection of Capitalization Rate:**

Starting point is average or normal risk for a specific structure type.

There must be demonstrated proof that is accepted by a Manager, before a deviation from that rate will be accepted.

- Differences from the norm that would be considered are: Better property location, the age and condition of the property, the reliability of the income stream, tenant reliability, marginal businesses.

**Comparison to Appraisal Institute Data:**

Standard bearer for fee appraisers (MAI Designations).

Overall capitalization rate data comparison for mall, office, warehouse, and apartment.

# KORPACZ REAL ESTATE INVESTOR SURVEY® NATIONAL MARKET INDICATORS THIRD QUARTER 2008

	Regional Mall		CBD Office		Warehouse		Apartment	
	3 <sup>rd</sup> Qtr 2008	2 <sup>nd</sup> Qtr 2008	3 <sup>rd</sup> Qtr 2008	2 <sup>nd</sup> Qtr 2008	3 <sup>rd</sup> Qtr 2008	2 <sup>nd</sup> Qtr 2008	3 <sup>rd</sup> Qtr 2008	2 <sup>nd</sup> Qtr 2008
Discount Rate (IRR) <sup>a</sup>								
Range (%)	7.00-11.00%	7.00-11.00%	6.00-11.00%	6.00-11.00%	5.50-10.50%	5.50-10.00%	6.00-10.50%	6.00-10.50%
Average (%)	8.73%	8.73%	8.23%	8.04%	7.77%	7.68%	8.23%	8.16%
Change (b.p.)		0		-19		-9		+7
Overall Cap Rate (OAR) <sup>a</sup>								
Range (%)	5.00-9.50%	5.00-9.50%	4.50-10.00%	4.50-10.00%	5.00-8.50%	5.00-8.50%	3.50-8.00%	3.50-8.00%
Average (%)	6.78%	6.71%	7.04%	6.68%	6.63%	6.56%	5.86%	5.75%
Change		+7		+36		+7		+11
Residual Cap Rate								
Range (%)	6.00-10.00%	6.00-10.00%	6.00-10.00%	6.00-10.00%	5.50-8.50%	5.50-8.50%	4.50-8.50%	4.50-8.50%
Average (%)	7.38%	7.38%	7.51%	7.53%	7.16%	7.18%	6.74%	6.69%
Change		0		-1		+2		+5

a. Rate on unleveraged, all-cash transactions

**DEFINITIONS:** b.p.: basis points. **Discount Rate (IRR):** Internal rate of return in all-cash transaction, based on annual year-end compounding. **Overall Cap Rate (OAR):** Initial rate of return in all-cash transaction. **Residual Cap Rate:** Overall capitalization rate used in calculation of residual price; typically applied to the NOI in the year following the forecast.

**SOURCE:** KORPACZ REAL ESTATE INVESTOR SURVEY. Personal survey of a cross section of major institutional equity real estate market participants conducted during July 2008 by PricewaterhouseCoopers LLP. For complete information on results of these and other markets covered in the Survey, contact PricewaterhouseCoopers LLP, PO Box 988, Florham Park, New Jersey 07932.

## Conventional Home Mortgage Rates by Metropolitan Area (%)

	3rd Q 2008	3rd Q 2007	3rd Q 2006		3rd Q 2008	3rd Q 2007	3rd Q 2006
Atlanta	6.44	6.73	6.77	Minneapolis	6.37	6.65	6.66
Boston <sup>a</sup>	6.12	6.65	6.55	New York <sup>a</sup>	6.30	6.66	6.71
Chicago <sup>a</sup>	6.45	6.78	6.60	Philadelphia <sup>a</sup>	6.27	6.73	6.86
Cleveland <sup>a</sup>	6.16	6.74	6.80	Phoenix	6.56	6.79	6.81
Dallas <sup>a</sup>	6.47	6.78	6.78	Pittsburgh	6.15	6.57	6.56
Denver <sup>a</sup>	6.46	6.74	6.83	Portland <sup>a</sup>	6.39	6.71	6.63
Detroit <sup>a</sup>	6.36	6.79	6.79	St. Louis	6.58	6.88	6.78
Houston <sup>a</sup>	6.48	6.84	6.92	San Diego	6.40	6.68	6.65
Indianapolis	6.57	6.82	7.00	San Francisco <sup>a</sup>	6.48	6.77	6.72
Kansas City	6.18	6.50	6.46	Seattle <sup>a</sup>	6.28	6.72	6.72
Los Angeles <sup>a</sup>	6.48	6.72	6.79	Tampa	6.50	6.87	6.95
Miami <sup>a</sup>	6.53	6.86	7.06	Washington, D.C. <sup>a</sup>	6.37	6.83	6.85
Milwaukee <sup>a</sup>	6.47	6.76	6.61				

# Consolidated Metropolitan Statistical area

## Conventional Home Mortgage Terms

	Oct. 2008	Apr. 2008	Oct. 2007	Apr. 2007	Oct. 2006	Oct. 2005		Oct. 2008	Apr. 2008	Oct. 2007	Apr. 2007	Oct. 2006	Oct. 2005
<b>New House Loans— U.S. Averages</b>							<b>Used House Loans— U.S. Averages</b>						
Interest rate (%)	6.10	5.98	6.55	6.21	6.69	6.03	Interest rate (%)	6.23	6.03	6.56	6.34	6.60	6.03
Term (years) ¶	29.3	28.9	29.4	29.5	29.7	29.4	Term (years)	28.6	27.9	28.9	29.4	29.0	28.3
Loan ratio (%)	75.2	76.4	78.6	76.3	75.7	75.1	Loan ratio (%)	76.4	77.4	80.0	79.7	77.3	73.9
Price (thou. \$)	333.7	346.3	350.7	368.4	349.7	338.6	Price (thou. \$)	283.9	303.5	280.0	285.6	293.5	297.8